

Charleston Harbor **WATER TAXI**

*Enhancing Potential Benefits of a
Charleston Harbor Water Taxi*

*A Summary of the
Land-Side Design Workshop
June 2001*

A Proposal for a Charleston Harbor Water Taxi

The National Park Service's recent construction of a new Fort Sumter visitor center and tour boat facility at Liberty Square in downtown Charleston has prompted a wider look at the possible linkages with other attractions and commercial centers in the Charleston area. These linkages could address transportation needs and enhance the experience of both park visitors and the wider general public. Toward this end, the National Park Service (NPS) has proposed a water taxi linking the new NPS visitor center and tour boat facility across the Cooper River to Patriots Point and the city of Mount Pleasant. This initial proposal has grown into a wider vision of an affordable water transportation service that could connect a variety of attractions, hotels, residential and business areas in downtown Charleston and the surrounding cities. In addition to helping reduce vehicular traffic on crowded highways, roads and bridges, the water taxi system was also seen as an enhancement to region-wide tourism and as a potential catalyst for local economic development and investment in public amenities that would benefit residents and tourists alike.



Understanding the Relationship with Places and Spaces

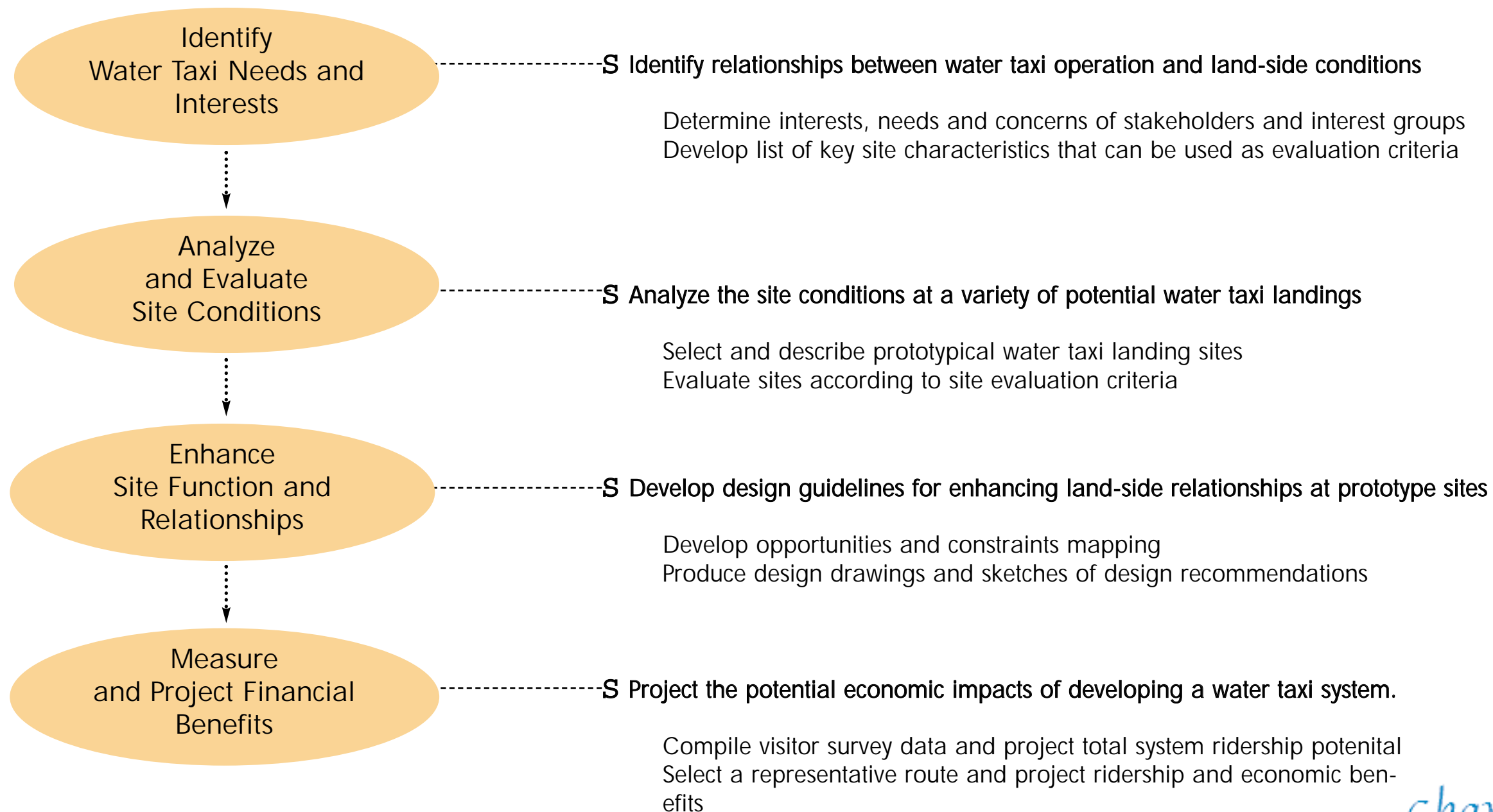
One of the critical components of a water taxi system will be the docking locations or "gateways" to and from the taxi service. These gateways include both the water and land-side operational facilities for the taxi system and support facilities for riders that require basic amenities and products and services. The functional effectiveness and characteristic appearance of these gateways are critical to people's choices to use the system and thus the system's economic viability and overall value to the community. To better understand the importance of these land-side development characteristics, a land-side design workshop was held in June 2001. This brief booklet chronicles how region-wide representatives from different backgrounds and with different interests came together in this workshop to identify gateway site conditions that contribute to a successful water taxi system. Participants also addressed how some potential gateway sites, as prototype sites for future sites, can be enhanced and transformed into more dynamic and attractive places for visitors and residents and how water transportation connections can enhance economic conditions of regional attractions, local businesses, and the community-at-large.





How the Workshop Process was Organized

The workshop was scheduled over a three-day period. The first day was spent with all the participants gathering information about the needs and interests of potential partners in a water taxi system and the site conditions at a variety of sites that had been advanced as possible docking sites. Ending the first day and carrying into the second day was an analysis of site conditions to determine key problems and opportunities – such as levels of access, circulation, transportation linkages, parking, shelter/seating, and proximity to goods and services. Economic impacts of the water taxi were also analyzed and projections developed. With the help of workshop participants, these analysis and evaluation products were synthesized into design concepts and recommendations by the end of the second day. The third day was an opportunity to report the design concepts and economic projections to all the workshop participants and to discuss these recommendations in an open forum. The following chart tracks the workshop process:





Participant's Interests Formed the Basis of the Site Evaluation

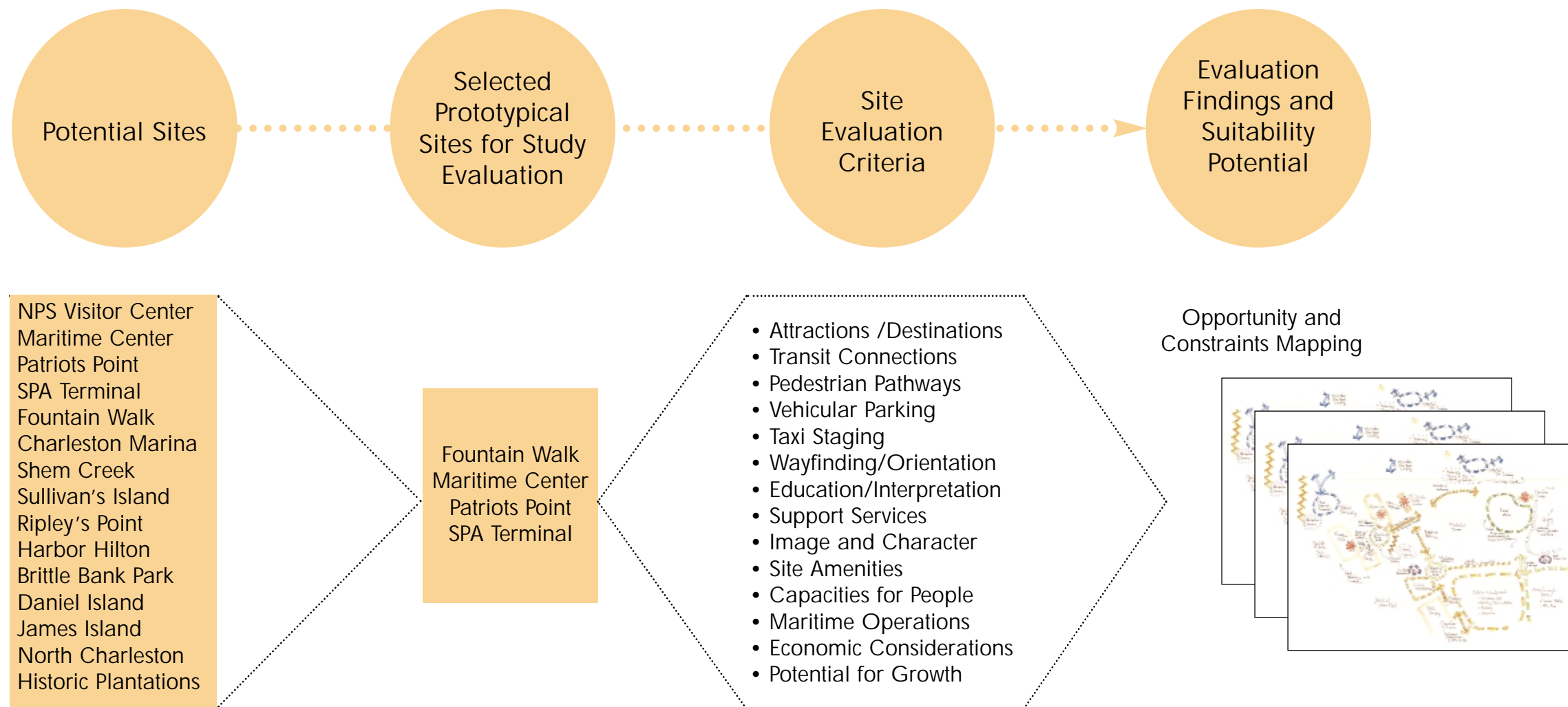
The following interests and concerns expressed by workshop participants were used to frame the site-related considerations and relationships that potential landing sites were evaluated against in the analysis.

INTERESTS AND CONCERNS	CORRESPONDING SITE CONSIDERATIONS AND RELATIONSHIPS
Ticket sales off/on site	Support services • Economic considerations (shared ticketing) • Attractions/ destinations (not necessarily limited to those near the proposed landing sites)
Conditions at landings (water depth, dock standards, operational issues, ADA requirements)	Maritime operations • Dock aspects • Pedestrian capacity • Economic considerations (operational costs)
Tourism interests to enhance experience and integrate with other programs/projects	Educational and interpretive • Potential growth • Economic considerations (e.g., combo ticketing)
Parking issues	Parking availability • Wayfinding/orientation
Shuttle connections, i.e., land-based (e.g., convention center, Patriots Point – Hotels)	Transit connections • Pathways • Wayfinding/orientation Amenities • Potential growth
Taxi operations (marketing/ group ticketing, timing)	Economic considerations (driven by operator's marketing activities and business plan) • Support from key partners (e.g., Charleston Area Convention and Visitors Bureau]
Visitor service grows to commuter service (e.g additional landing sites, future expansion, community transportation needs)	Support facilities • Amenities • Parking availability
Future service of Fort Sumter Tour Boats from Patriots Point?	Interpretation and education presentation • Support services and transportation linkages
Community vision to propel projects with public-private partnerships and community involvement to develop momentum for project	Community involvement and goal setting • Stakeholder involvement • Open public process • Phasing options to build support
Survey of visitors	Better understanding of needs and desires • Functional and economic choices
Address traffic and congestion (for visitors and local residents)	Support facilities • Parking availability • Transit connectivity



Prototypical Landing Sites Selected and Analyzed

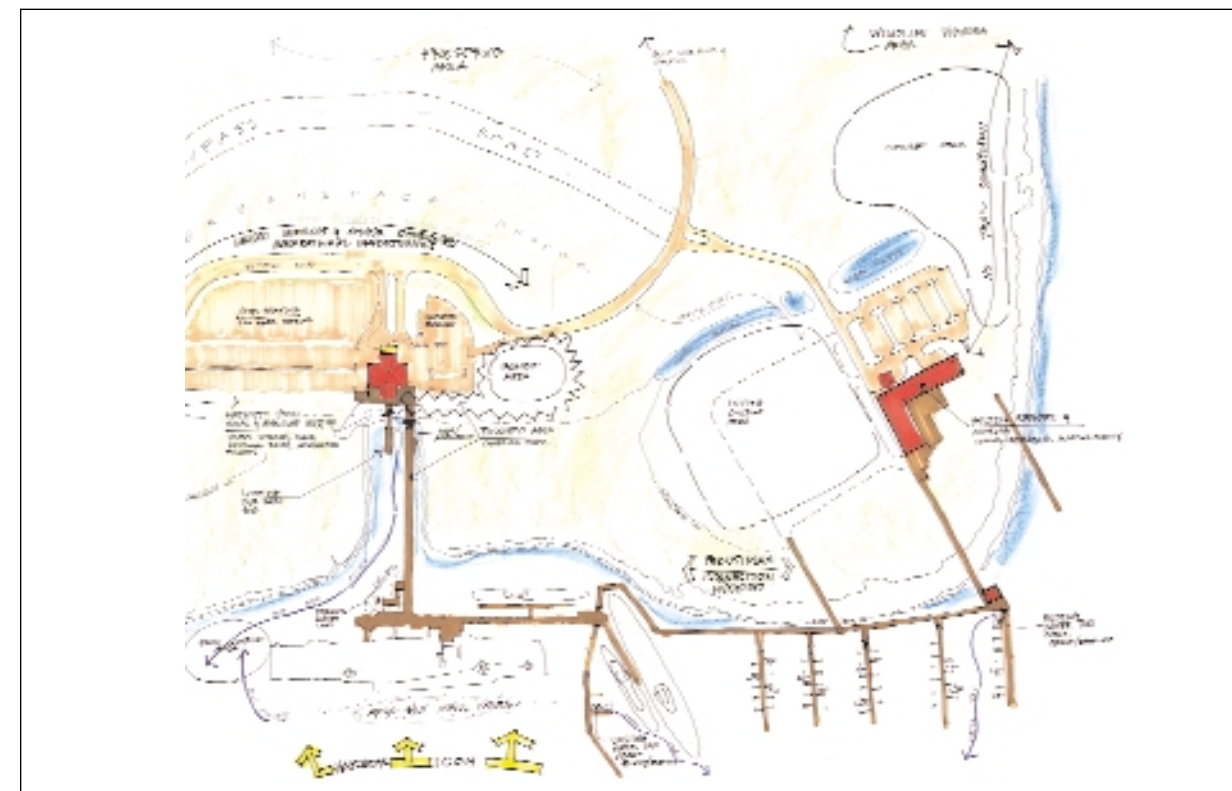
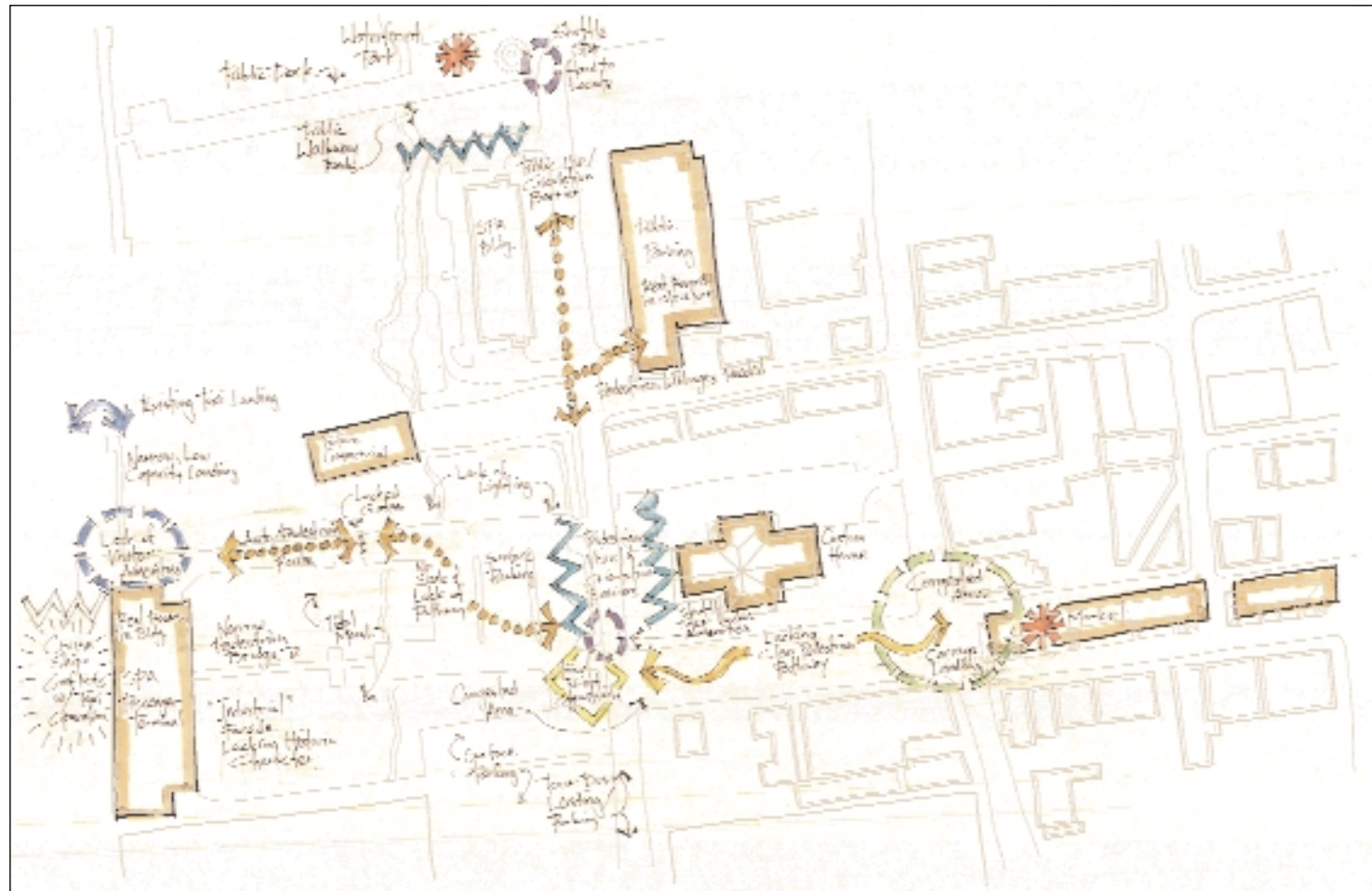
Site evaluation criteria was developed to analyze potential landing sites and to help determine initial site suitability. Potential landing sites that had a favorable suitability for water taxi service and represented a variety of site characteristics were selected as prototypical sites. These prototypical sites best demonstrated the evaluation process that could be used for additional sites in the future. Evaluation findings for the four prototype sites are detailed in Appendix A.





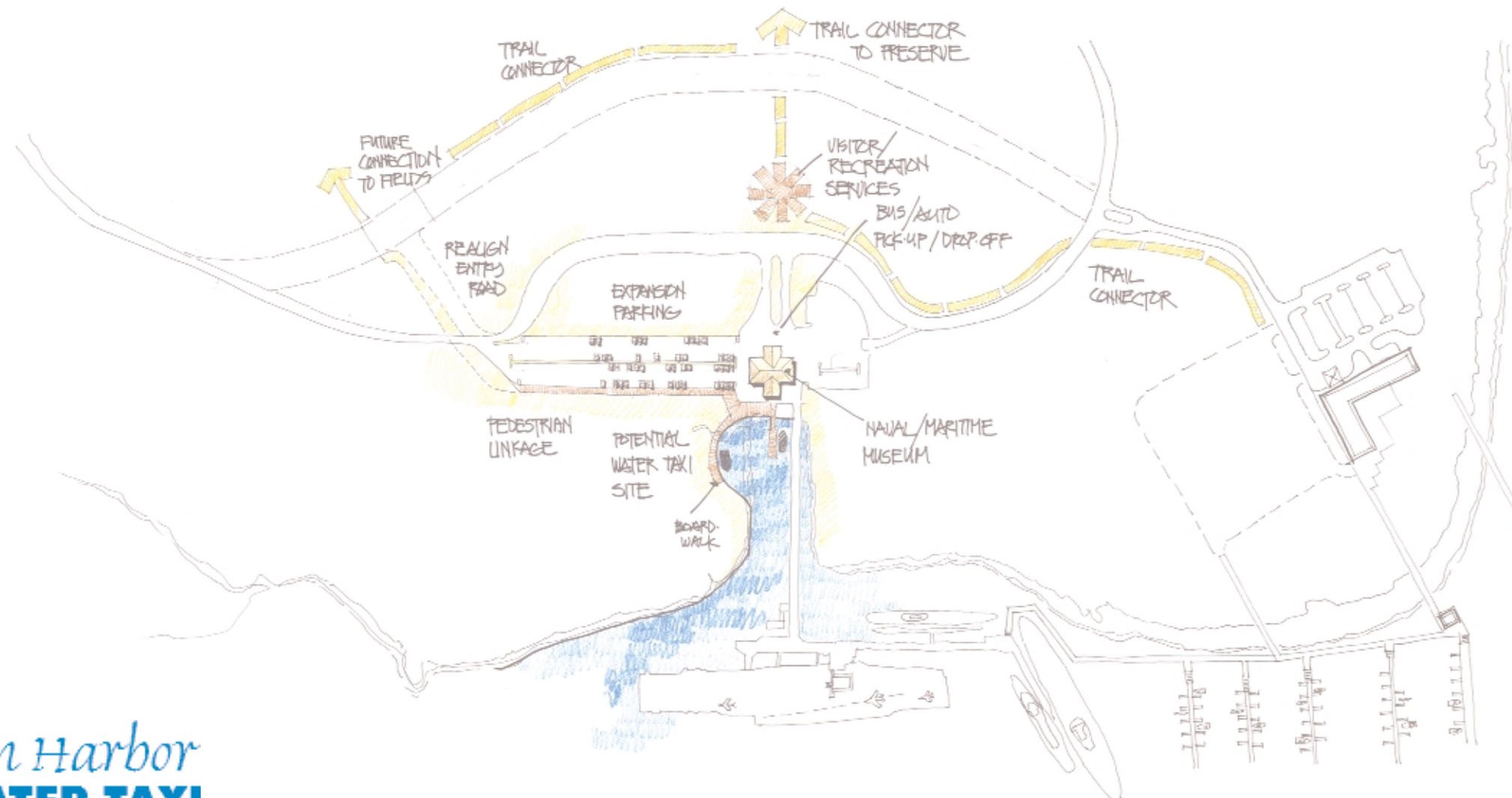
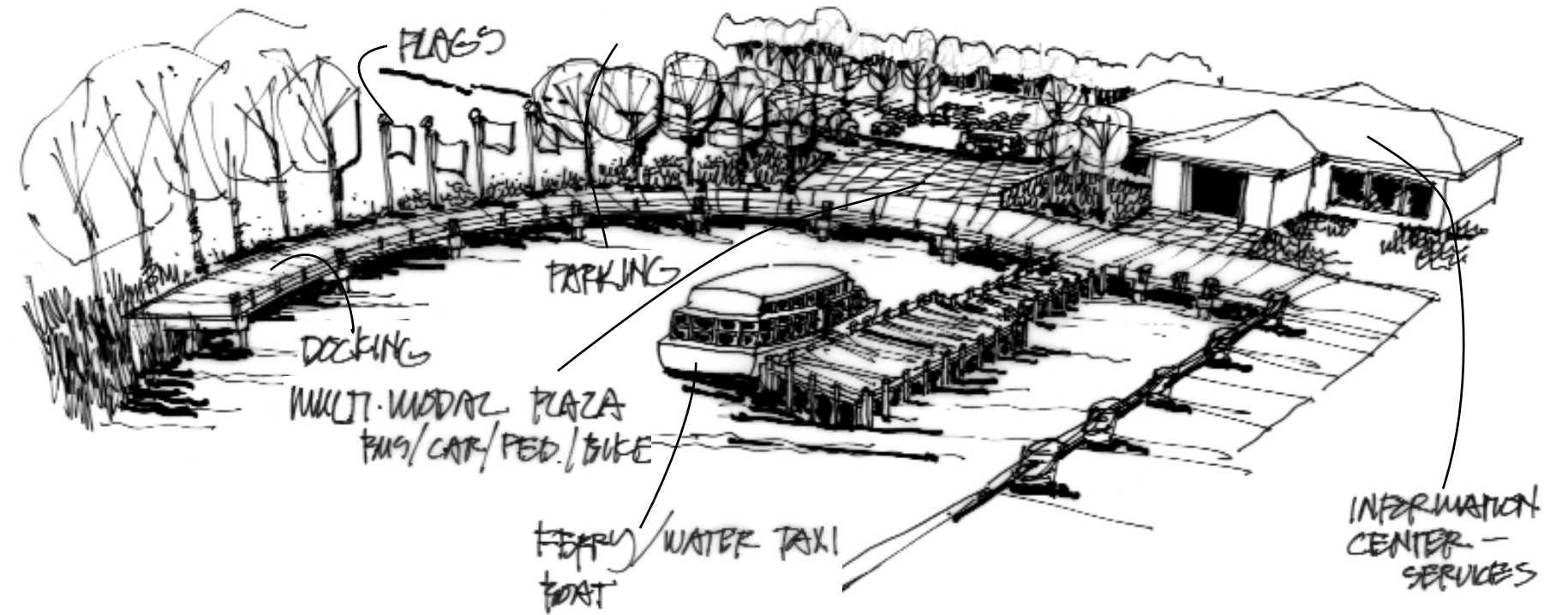
Site Opportunities and Constraints Maps

The evaluation of each site was performed and site strengths and weaknesses were mapped as the basis for developing design concepts.



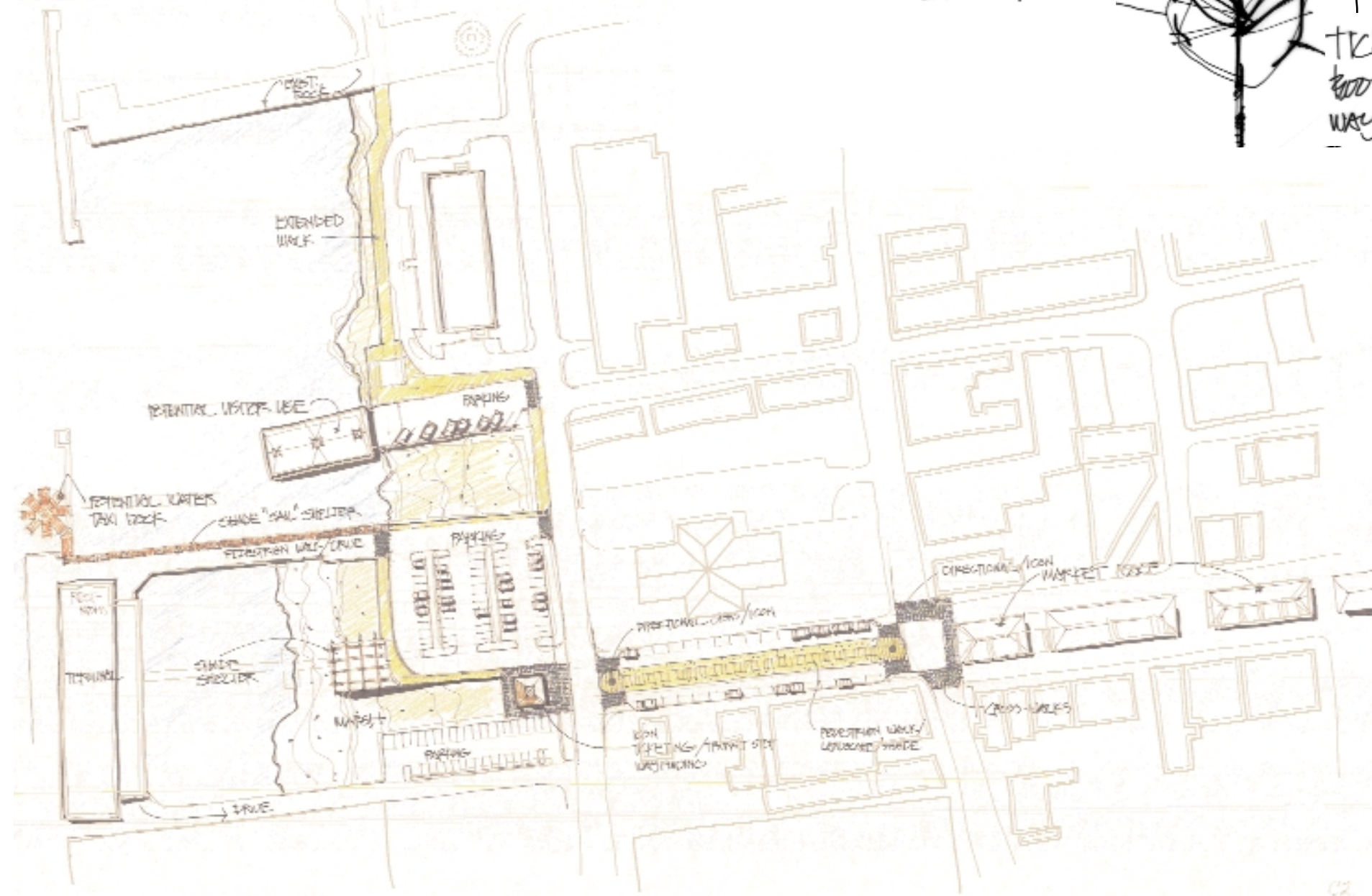
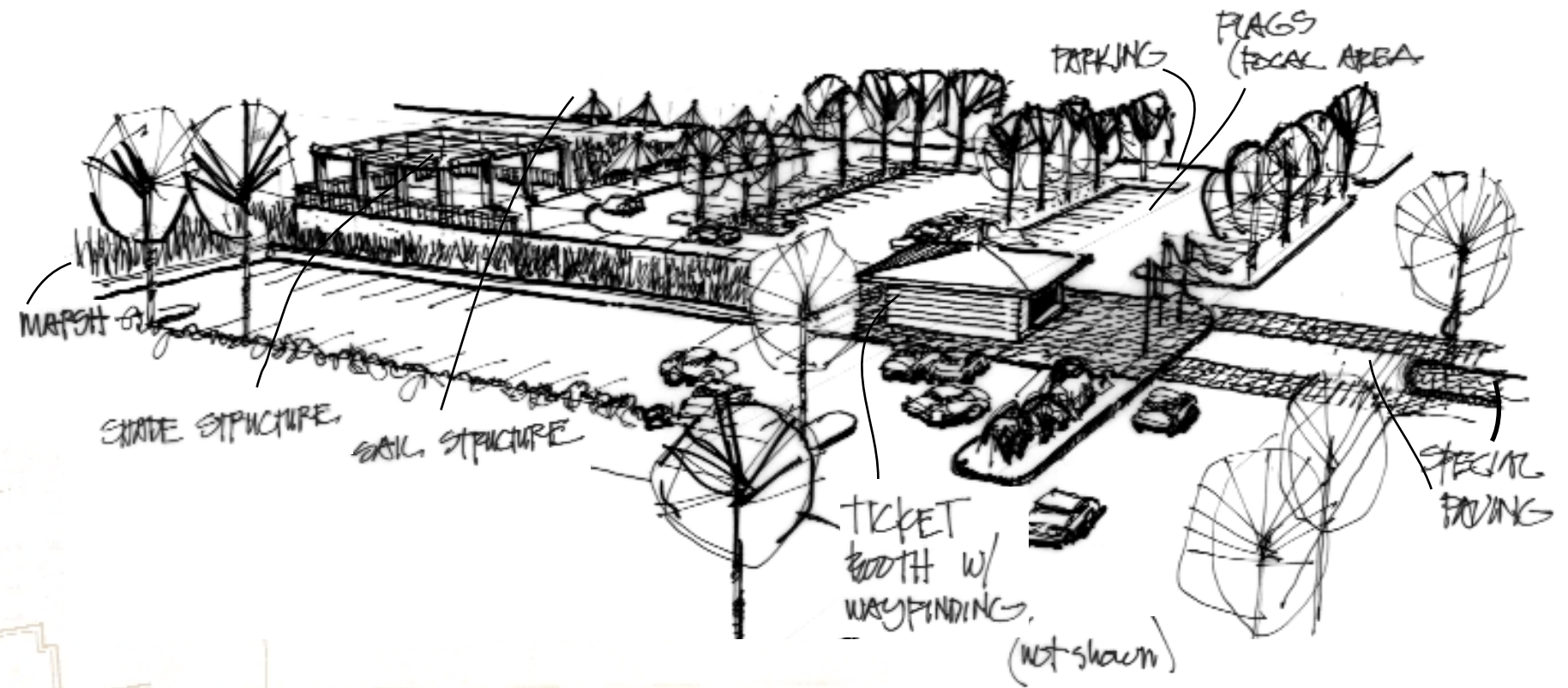
Patriots Point

- Enhance water taxi stop and separate from fee attraction areas
- Provide multimodal connections to pedestrian and bike pathways
- Develop wildlife viewing and open space recreational opportunities
- Develop and promote connection to the golf course
- Plan associated commercial development for visitors



SPA Terminal

- Provide enhanced amenities such as seating and shelter
- Develop orientation and wayfinding with structures and paving
- Promote adaptive active reuses of adjacent buildings
- Enhance relationships with the water's edge





How Benefits can be Measured

The following are five key dimensions for assessing potential future economic benefits that could be derived from a water taxi system at a particular location. Each potential prototype site was assessed according to these factors

Local Demand

- presence of untapped markets or potential for significant market growth
- emphasis on the capture of demand in the neighborhood (or immediate locale)

Strategic Location

- proximity to area attractions and destinations
- presence of transportation hubs
- proximity to consumers and suppliers

Proximity to "Regional Clusters"

- extent to which the project matches strengths of the regional economy
- ability of the project to build on regional identity

Community Involvement

- involvement of local community/neighborhood stakeholders
- strength, unity, and leadership of local community/neighborhood organization
- ability to work through collaborative efforts

Site Growth

- match of the project to city planning and redevelopment efforts
- potential for expansion through networks and systems

Other Factors may include:

- accessibility to, and availability of labor
- public investment



Estimating Demand for a Water Taxi in the Charleston Region

A survey of over 1000 Fort Sumter and S.C. aquarium visitors and residents was conducted in Summer 2000.

It was determined that approximately **32 percent of visitors** would "definitely" use or "most likely" use a taxi service that would run between Mt. Pleasant and downtown Charleston. Residents that would definitely or likely use the service polled even higher at over **40 percent**.



Estimating Total Water Taxi Ridership

Water taxi ridership in Charleston could be comparable to annual ridership levels for other well-established, year-round water taxi systems in other U.S. cities. In 2000, the Baltimore water taxi system sold 525,000 daily tickets. Savannah's water taxi system averages 300,000 riders per year.

- Visitation to the Charleston metro area grew from 3 million in 1996 to 3.9 million in 2000.
- The distribution of area visitors staying overnight in downtown Charleston was 34% or 1.3 million per year and 17% or 0.64 million per year for Mt. Pleasant.
- 17% of visitors to the S.C. Aquarium and Fort Sumter stated that they would "definitely use" a water taxi system.
- Assuming these visitors are representative of Charleston metro visitors, water taxi ridership could be as high as **334,000 per year**.



Estimating Water Taxi Ridership Impacts to Patriot's Point

It was estimated that of the 456,000 non resident visitors to the S.C. Aquarium, approximately 55,000 would ride the water taxi to Patriots Point. Based on the potential flow of riders through Patriots Point, the water taxi would result in the following projected revenue impacts per year.

10% of ridership
would visit the
Yorktown/Naval Museum

$5,500 \times \$8.95 / \text{person}$

**Increased revenues =
\$49,000**

50% of riders would
stop in the gift shop

$27,500 \times \$5.12 / \text{person}$

**Increased revenues =
\$140,800**

50% of riders would
buy from the snack bar

$27,500 \times \$1.32 / \text{person}$

**Increased revenues =
\$36,300**

Appendix A: Water Taxi Workshop Participants

June 19-21, 2001

NAME	COMPANY / AGENCY	PHONE NUMBER
David Burnette	Patriots Point and Maritime Museum	(843) 884-2727
Christine Nelson Burr	CARTA	(843) 720-3961
Henry Chandler	Patriots Point and Maritime Museum	(843) 881-5958
H James Craven	Charleston Harbor Ferry Group, LLC	(843) 881-3582
Jeff Davis	HNTB – Charleston	(843) 207-1899
Belinda Davis	NOCHAZ	(843) 740-2571
Christiane Farrell	Mt Pleasant Planning	(843) 884-1229
Naomi Kleckner	Industrial Economics Inc. – Cambridge, MA	(617) 354-0074
Francis Gallagher	HNTB – Charleston	(843) 207-1899
Jose D Hernandez	Charleston Harbor Ferry Group	(843) 224-5160
Perrin Lawson	CACVB	(835) 805-3050
Darren McClare	Charleston Water Taxi Inc.	(843) 509-7285
Michael McGinnis Jr.	SC State Ports Authority	(843) 577-8144
Wanneitz Mallette	City of North Charleston	(843) 740-2577
Rick Mosteller	Fort Sumter Tours	(843) 881-7337
Herman Pena	City of Charleston	(843) 724-7368
Stuart Reeves	Star Flat Marina	(843) 884-8889
Patrick Shea	NPS – DSC	(303) 969-2347
Robert J Simpo	RJJ	(843) 571-1279
Dennis Strah	HNTB – Denver	(303) 839-8300
Mark Tabor	NPS – DSC	(303) 969-2493
John Tucker	NPS – Fort Sumter N.M.	(843) 727-4740
Carolee Williams	City of Charleston	(843) 724-3776

Appendix B: Evaluation of Potential Water Taxi Sites

	Attractions/ Destination	Transit Connections	Pathways (Ped., bikes, vehicles)	Parking Availability	Staging	Wayfinding/ Orientation	Education/ Interpretation	Support Services (Restrooms)	Support Services (Food)	Support Services (Ticket Sales)
Patriot Point	* Yorktown/Naval Museum * College of Charleston Athletic Fields * Hilton Resorts * Nature Preserve (bird viewing)	* Bus route connection between Charleston & Patriots Point; * No connections to Mt. Pleasant, attractions/ hotels/ restaurants, athletic facilities	* New parkway includes sidewalks * Dockside connection to Hilton Resort * Only immediate Patriots Point area is pedestrian/bike friendly	* Currently free parking (550+ overflow spaces) * Directly adjacent to site	* Good landside staging * Problematic dock-side staging (conflict with access to attraction) * Not handicap accessible	* Needs improvement from parking lot to ticket booths * Dockside is good * Dockside connection to Hilton Resort hindered by	* Redevelopment plans will greatly facilitate * Presently has limited landside interpretive displays * High-quality interpretation & education for water-side attractions (i.e., ships)	* Available- needs updating	* Available- limited selection, snack-oriented	* Could be easily combined with existing ticket offices
Fountain Walk	* S.C. Aquarium * NPS Visitors Center * IMAX Theater * Maritime Center * Irish Memorial * Open Space/ Community Development * Spirit of SC Boat Building	* DASH connection (Market/ Waterfront Shuttle); * Sheltered stop within 1,000 ft; * Operates on 10 min. headway;	* Connected to Peninsula waterfront path * Sidewalk connections to Calhoun St. Corridor * Overall pedestrian friendly and bikeable area	* Aquarium parking garage (1,100 spaces), hourly rates, nearby (one block) * Gaillard garage parking (596 spaces), hourly rates, 4 blocks	* Good landside and dockside staging (16 ft wide dock) * Handicap accessible (mostly likely to meet ADA reqs)	* From garage/street side, poor view corridors; * From aquarium, NPS, and peninsula waterfront path, good view corridors	* Significant availability (directly adjacent to Aquarium, NPS visitor center, IMAX, and Irish Memorial)	* Readily available at multiple locations, new	* Available- food court, diverse options	* Booth could be built at staging area on dock * Possibility of selling tickets at the Aquarium ticketing office
Maritime Center	* S.C. Aquarium * NPS Visitors Center * IMAX Theater * Maritime Center * Irish Memorial * Open Space/ Community Development * Spirit of SC Boat Building	* DASH connection (Market/ Waterfront Shuttle); * Nonsheltered stop within 1,200 ft * Operates on 10 min. headway	* Connected to Peninsula waterfront path * Sidewalk connections to Calhoun St. Corridor * Overall pedestrian friendly and bikeable area	* Aquarium parking garage (1,100 spaces), hourly rates, nearby (3 blocks) * Gaillard parking garage (596 spaces), hourly rates, 6 blocks	* Good landside and poor dockside staging (6ft wide dock) * Handicap accessible (but not meeting ADA reqs)	* From street side, good view corridor; * From aquarium, NPS, uncertain until constructed; * From peninsula walkway,	* Significant availability (nearby but not immediately adjacent to Aquarium, NPS visitor center, IMAX, and Irish Memorial)	* Available at multiple locations	* Designs for restaurant adjacent to the maritime center * Nearby- food court, diverse options	* Tickets sold at gift shop inside the Maritime Center located some distance from the landing area
SPA Terminal	* City Market * Waterfront Park * Historic District * Carriage Tours * Bike Taxi * Restaurant District * Hotels/Inns * Passenger Terminal (cruise ships, meeting space, special events)	* DASH connection- 2 route options: Market/ Waterfront Shuttle & Broad St. Shuttle; * Nonsheltered stop within 1,200 ft * Operates on 10 min. headway	* Connected to Peninsula waterfront path * Sidewalk connections to Market St. District * Overall pedestrian friendly area (not as bike friendly)	* Cumberland/Concord parking garage (624 spaces), hourly rates, 2 blocks * 2 alternative parking garages within 5 blocks * Small surface lots directly adjacent to site * On-street meter parking throughout area * Long-term parking	* Poor landside (cluttered) staging * Good dock side staging (10ft wide dock) * Not handicap accessible	* Street side, very poor * From dockside, needs improvements * From peninsula waterfront path, poor due to discontinuity	* Close proximity to interpretive/tourist services (e.g., carriage rides, historic tours and walks) * Conversion of US Customs House Building would greatly improve this aspect of the site	* Not available- closest public restrooms most likely at Charleston Place Omni Hotel	* Wide variety of options, but generally at least 2 blocks away (e.g., East Bay Street)	* New ticket booth to be constructed at the foot of Market St.

Appendix B: Evaluation of Potential Water Taxi Sites (cont.)

	Image and Character	Amenities (Landscape)	Amenities (Shade/Shelter)	Amenities (Resting Area)	Amenities (Lighting)	Pedestrian Capacity (flow to and from landing)	Dock Aspects (water side)	Maritime Operations	Economic Considerations	Potential Growth
Patriot Point	*Marina and/or military feel and character	*Patriots Point is landscaped, but staging area is paved with little landscaping	*Shaded picnic area	*Ample picnic tables	*Well-lit at evening areas from parking to staging area	*Facilities appear adequate *Relocating the dock will need to be re-evaluation	*Uncertainty regarding reconfigured location *Likely to provide single landing	*Sheltered location *Existing location has shallow water depth (1-2 ft MLLW)	For Taxi Operator: *Privately owned dock *Potentially reduced docking fees *Uncertain potential for combo ticket sale For Stakeholder(s): *Greater visibility *Increased sales (food and gift shops) *Increased visitation	*New bike route on the Cooper River Bridge *Walkway/path to Nature Preserve *Possible improved public transportation connections in future *Connectivity with emerging commercial development
Fountain Walk	*Commercial feel *Tourist feel *“pedestrian-scale” *Sense of centrally connected node	*Nicely landscape-integrated with adjacent attractions	*Not available in staging area (e.g., at or next to the dock) *Possibly wait inside or under sheltered corridors to dock	*Not available in staging area (e.g., at or next to the dock) *Possibility to wait inside the food court	*Well-lit area, extending to adjacent attractions and street side destinations (e.g., transit and parking)	*Wide dock and walkways provide good level of pedestrian flow and adequate capacity	*Size, freeboard, & configuration are good for passenger traffic *Provides primary landing and smaller auxiliary landing	*Very close to SPA Columbus Terminal Pier *Conflict with container ships will occur periodically *Current and landing orientation is a concern	For Taxi Operator: *Privately owned dock *Docking fees potentially higher *Greater interest in potential for combo ticket sales (i.e., NPS) For Stakeholder(s): *Increased use of facility services (e.g., food court)	*Improved and more certain retail and commercial services *Nearby development (e.g., housing, symphony hall, ship building &/or African-American museum)
Maritime Center	*Marina feel *Stark and functional *Slightly disconnected from attractions/destinations	*Emerging restaurant development may help *Recent landscaping efforts, will eventually mature	*None available on the dock *Maritime Center offers closest place for physical shelter and/or shade	*Several benches along peninsula walkway located at bulkhead of the marina	*Well-lit area to street side	*6 ft wide dock likely to restrict pedestrian flow *Likely to constrain loading and off-loading	*Shallow water depths restrict usable sections of the dock *Less than optimal freeboard *Adequate space for multiple landings	*6 ft water depth is available in portions of the marina *Some level of shelter	For Taxi Operator: *Public-owned dock *Anticipated lower docking fees *Greater interest in potential for combo ticket sales (i.e., Aquarium and NPS) For Stakeholder(s): *Improved utilization of existing community space	*Development of restaurant adjacent to site *Nearby development (e.g., housing, symphony hall, ship building museum &/or African-American museum)
SPA Terminal	*Industrial feel *Stark, uninviting *Lacks level of comfort for pedestrian access and staging *Does not appear to be well connected with attractions/ destinations	*Needs landscaping	*Current configuration does not provide shelter/shade *Potential exists (to better utilize existing overhangs at passenger terminal)	*None available (space exists to provide adequate resting areas)	*Not certain of current lighting levels and connections to street-side	*4 ft wide gangway will restrict pedestrian flow *10 ft wide dock should adequately accommodate loading and off-loading	*60 ft dock length *Provides single landing *Potential for expansion-double landing	*Not a sheltered location *More than adequate water depth *Passenger ship movement/ docking may obstruct water taxi operation/ landing	For Taxi Operator: *Privately owned dock *Potentially reduced docking fees *Uncertain potential for combo ticket sales (i.e., carriage and historic tours) For Stakeholder(s): *Improved utilization of existing community space *Increased visitor movement between destinations	*Potential redevelopment over time (e.g., long term union pier redevelopment plan)

Appendix C – Economic Analysis Findings

	Local Demand	Strategic Location	Proximity to Regional Clusters	Site Growth	Other Factors
Fountain Walk (Liberty Sq.)	<ul style="list-style-type: none"> currently does not have full utilization of space for restaurants and shops closest cluster of restaurants and shops several blocks away within ½ mile radius: 7 restaurants, 24 hotels/motels 	<ul style="list-style-type: none"> centrally located next to several key attractions, SC Aquarium, NPS Visitors Center, IMAX parking garage available currently serviced by DASH 	<ul style="list-style-type: none"> facilitates tourism and movement of visitors around Charleston area enhances economic development plans potential to alleviate regional problem (i.e., vehicular congestion) 	<ul style="list-style-type: none"> future plans to provide increased connectivity, e.g., through peninsula walkway future plans for more development (e.g., museum, Irish Memorial, Symphony Hall) Community Involvement 	<ul style="list-style-type: none"> if water taxi ridership grows, will require strategies to reduce parking area requirements
Maritime Center (Liberty Sq.)	<ul style="list-style-type: none"> currently does not have full utilization of space for restaurants and shops closest cluster of restaurants and shops several blocks away 	<ul style="list-style-type: none"> currently serviced by DASH parking available some concern regarding walking distance to several key attractions, SC Aquarium, NPS Visitors Center, IMAX 	<ul style="list-style-type: none"> facilitates tourism enhances economic development plans potential to alleviate regional problem (i.e., vehicular congestion) 	<ul style="list-style-type: none"> future plans to provide increased connectivity, e.g., through peninsula walkway future plans for more development (e.g., museum, Irish Memorial, Symphony Hall) 	<ul style="list-style-type: none"> if water taxi ridership grows, will require strategies to reduce parking area requirements
Patriots Point	<ul style="list-style-type: none"> significant opportunities for development of businesses and services supporting high-end tourism opportunity to increase visitation and revenues at Yorktown/Naval Museum within ½ mile radius: one hotel, no restaurants 	<ul style="list-style-type: none"> located near Yorktown/Naval Museum, College of Charleston athletic fields located near hotels and inns within 3 mile radius: 16 hotels and 26 restaurants parking available needs connectivity via public transportation, e.g., DASH/CARTA 	<ul style="list-style-type: none"> facilitates tourism (near overnight accommodations, restaurants, shops) enhances economic development plans strong potential to alleviate regional problem (i.e., vehicular congestion) good portal to Mt. Pleasant 	<ul style="list-style-type: none"> short and long term redevelopment plans shop, hotels, tourisms 	<ul style="list-style-type: none"> strong potential to handle increased ridership possibly more suited for servicing commuters and visitors long term planning needs, GMP for Yorktown/Naval Museum
SPA Terminal	<ul style="list-style-type: none"> saturated markets (i.e., services and business supporting tourism activities) within ½ mile radius: 90 restaurants and 24 hotels possible expansion of special events 	<ul style="list-style-type: none"> located near several key attractions, Market St., East Bay St., historic Charleston, carriage tours, located near hotels and inns currently serviced by DASH parking available 	<ul style="list-style-type: none"> facilitates tourism- functions as portal, facilitating movement of visitors around Charleston area enhances economic development plans strong potential to alleviate regional problem (i.e., vehicular congestion) 	<ul style="list-style-type: none"> long term potential redevelopment plans/SPA plans 	<ul style="list-style-type: none"> strong potential to handle increased ridership possibly more suited for servicing commuters and visitors cruise terminal growing in use, 34 cruises in 2001

Appendix D:

Summary of Survey Responses on Potential Use of a Water Taxi Service

Summary of Responses by FOSU and S.C. Aquarium Visitors: Use of a Water Taxi Service						
	Aquarium Visitors		Fort Sumter Visitors		Total	
	Non-residents	Residents	Patriots Point	City Marina	Count	Percent
Definitely use	53 (14%)	28 (23%)	60 (19%)	39 (14%)	180	17%
Most likely use	49 (13%)	21 (18%)	53 (17%)	42 (15%)	165	15%
Might use	94 (25%)	33 (28%)	63 (20%)	71 (25%)	261	24%
Not use	46 (12%)	24 (20%)	38 (12%)	30 (11%)	138	13%
Not sure ¹	137 (36%)	13 (11%)	95 (31%)	92 (34%)	337	31%
Total	379	119	309	274	1,081	100%
¹ Includes non-responses. Source: <i>Assessment of the Regional Impacts Associated with the Consolidation of Fort Sumter Departure Points</i> , prepared by Industrial Economics, Inc. December 2000.						

